WE CLAIM:

1. An assembly comprising an electronic circuit electrically insulated from, but in thermal communication with a heat sink, the assembly comprising:

(a) a heat sink;

(b) an electronic circuit, comprising at least one substrate layer and a metallic circuit trace, that produces heat as a result of operation; and

(c) disposed between the circuit and the heat sink, an insulating layer having a minimum thermal impedance of 250°C-mm²/watt and a minimum dielectric strength of 400 volts (ac), the layer comprising:

(i) a first thermally conducting adhesive layer having a thickness less than 60μ, in contact with the heat sink, comprising an adhesive and about 10 to 50% by volume of a thermally conductive solid particulate;

(ii) an unfilled polymeric film layer having maximum a thickness less than 15μ; and

(iii) a second thermally conducting adhesive layer having a thickness less than 60μ, in contact with the circuit, comprising an adhesive and about 10 to 50% by volume of a thermally conductive electrically insulating solid particulate;

wherein the substrate and insulating layer has a maximum thickness of about 5 mm.

2. The assembly of claim 1 wherein the circuit comprises two or more layers of substrate each supporting at least one circuit trace.

3. The assembly of claim 1 wherein the unfilled polymeric film layer comprises a polyester or a polyimide.

4. The assembly of claim 3 wherein the unfilled polyester polymeric film layer comprises a polyethylene naphthalate.

5. The assembly of claim 3 wherein the polyester is a polyethylene terephthalate.

6. The assembly of claim 1 wherein the unfilled polymeric layer comprises a polyether ether ketone, a polyphenylene sulfide.

7. The assembly of claim 3 wherein the unfilled polyimide polymeric film layer comprises a polyetherimide or a polyimide.

8. The assembly of claim 1 wherein the thermally conducting adhesive layer comprises an epoxy adhesive.

9. The assembly of claim 1 wherein the thermally conducting adhesive layer comprises an acrylic adhesive.

10. The assembly of claim 1 wherein the thermally conducting material within an adhesive layer comprises a thermally conductive ceramic material.

11. The assembly of claim 10 wherein the thermally conducting ceramic material within an adhesive layer is independently selected from the group consisting of aluminum oxide, beryllium oxide, magnesium oxide, titanium oxide, zinc oxide, boron nitride, aluminum nitride, silicon nitride, silicon carbide, silica, diamond, zirconium oxide, zinc oxide, tin oxide, copper oxide, antimony oxide, and mixtures thereof.

12. The assembly of claim 1 wherein the thermally conducting material within the adhesive layer adjacent to the heat sink is Cu, Al, Ag, Au, Ni, Zn, Fe, Pd, Pb, Sn, solder, graphite, carbon or mixtures thereof.

13. The assembly of claim 1 wherein the impedance of the thin film layer is about 300 v (ac).

14. The assembly of claim 1 wherein the thermal conductivity of the first adhesive layer is greater than about 0.5 watt/m-K.

15. The assembly of claim 1 wherein the thermal conductivity of the second adhesive layer is greater than about 0.5 watt/m-K.

16. The assembly of claim 1 wherein the thermal impedance of the insulating layer is less than about 100°C-mm²/watt.

17. The assembly of claim 1 wherein the circuit comprises surface mounted active or passive components.

18. The assembly of claim 1 wherein the flexible circuit has at least one circuit trace on each side and plated through holes.

19. The assembly of claim 1 wherein the circuit additionally comprises a metallic circuit trace providing a thermal passageway.

20. The assembly of claim 19 wherein the thermal passageway comprises a metallized via providing a thermal passageway through a substrate.

15. The assembly of claim 1 wherein the thermal conductivity of the second adhesive layer is greater than about 0.5 watt/m-K.

16. The assembly of claim 1 wherein the thermal impedance of the insulating layer is less than about 100°C-mm²/watt.

17. The assembly of claim 1 wherein the circuit comprises surface mounted active or passive components.

18. The assembly of claim 1 wherein the flexible circuit has at least one circuit trace on each side and plated through holes.

19. The assembly of claim 1 wherein the circuit additionally comprises a metallic circuit trace providing a thermal passageway.

20. The assembly of claim 19 wherein the thermal passageway comprises a metallized via providing a thermal passageway through a substrate.

21. An insulating laminate having a maximum thermal impedance of 250°C-mm²/watt and a minimum dielectric strength of 400 volts (ac), the layer comprising:

(i) a first thermally conducting adhesive layer, having a thickness less than 60$\mu$, comprising an adhesive and about 10 to 50% by volume of a thermally conductive solid particulate;

(ii) an unfilled polymeric film layer having maximum a thickness less than 15$\mu$; and

(iii) a second thermally conducting adhesive layer, having a thickness less than 60$\mu$, comprising an adhesive and about 10 to 50% by volume of a thermally conductive electrically insulating solid particulate;

wherein the laminate has a maximum thickness of about .135 mm.

22. The laminate of claim 21 wherein the unfilled polymeric film layer comprises a polyester or a polyimide.

23. The laminate of claim 22 wherein the polyester polymeric film layer comprises a polyethylene naphthalate.

24. The laminate of claim 22 wherein the polyester is a polyethylene terephthalate.

25. The laminate of claim 21 wherein the unfilled polymeric layer comprises a polyether ether ketone, a polyphenylene sulfide.

26. The laminate of claim 22 wherein the polyimide layer comprises a polyetherimide or a polyimide.

27. The laminate of claim 21 wherein the thermally conducting adhesive layer comprises an epoxy adhesive.

28. The laminate of claim 21 wherein the thermally conducting adhesive layer comprises an acrylic adhesive.

29. The laminate of claim 21 wherein the thermally conducting material within an adhesive layer comprises a thermally conductive ceramic material.

30. The laminate of claim 29 wherein the thermally conducting ceramic material within an adhesive layer is independently selected from the group consisting of aluminum oxide, beryllium oxide, magnesium oxide, titanium oxide, zinc oxide, boron nitride, aluminum nitride, silicon nitride, silicon carbide, silica, diamond, zirconium oxide, zinc oxide, tin oxide, copper oxide, antimony oxide, and mixtures thereof.

31. The laminate of claim 21 wherein the thermally conducting material within an adhesive layer to be put adjacent to a heat sink is Cu, Al, Ag, Au, Ni, Zn, Fe, Pd, Pb, Sn, solder, graphite, carbon or mixtures thereof.

32. The laminate of claim 21 wherein the impedance of the thin film layer is about 300 v (ac).

33. The laminate of claim 21 wherein the thermal conductivity of the first adhesive layer is greater than about 0.5 watt/m-K.

34. The laminate of claim 21 wherein the thermal conductivity of the second adhesive layer is greater than about 0.5 watt/m-K.

35. The laminate of claim 21 wherein the thermal impedance of the laminate is less than about 100°C-$mm^2$/watt.